

REMARKS

Claims 1-9 are all the claims presently pending in the application. Claim 1 is amended to more clearly define the invention. Claim 1 is independent.

These amendments are made only to more particularly point out the invention for the Examiner and not for narrowing the scope of the claims or for any reason related to a statutory requirement for patentability.

Applicants also note that, notwithstanding any claim amendments herein or later during prosecution, Applicants' intent is to encompass equivalents of all claim elements.

Applicants thank Examiners Han and Ward for the courtesies extended to the Applicants' representative during a personal interview on February 22, 2005. During the personal interview, the Examiners agreed that the applied references do not teach or suggest the feature of two metallic radiation plates that each surround at least three outer surfaces of the holder. However, the Examiners indicated that an update search will be necessary.

I. THE CLAIMED INVENTION

An exemplary embodiment of the claimed invention, as recited by, for example, independent claim 1, is directed to an LED lamp that includes an LED with a pair of terminals, a holder to which the LED is attached and a radiation unit. The holder is made of an insulating material. The radiation unit includes two metallic radiation plates that each surround at least three outer surfaces of the holder and are attached to the holder while being insulated from each other. Each of the radiation plates include a contact portion that contacts the pair of terminals of the LED being attached to the holder and a power receiving terminal.

Conventional lamps may include high output light emitting elements that consume

several watts of power and, therefore, generate a substantial amount of heat. These conventional lamps are oftentimes used as a vehicle lamp and may be placed in a confined space that has poor ventilation which prevents a sufficient amount heat to be radiated. Thus, these conventional lamps suffer from the effects of inadequate heat radiation.

In stark contrast, the present invention provides a lamp that includes two metallic radiation plates that each surround at least three outer surfaces of the holder. In this manner, heat may be radiated more efficiently thereby permitting the light emitting element to operate stably without reducing the efficiency of the light emitting element and without increasing the size of the lamp (page 9, lines 20-29).

II. THE PRIOR ART REJECTION

The Examiner alleges that the Serizawa et al. reference would have been combined with the Takano et al. reference to form the claimed invention. Applicants submit, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Applicants submit that these references would not have been combined as alleged by the Examiner. Indeed, the references are directed to completely different matters and problems.

Specifically, the Takano et al. reference is directed to solving the problems of a tendency of a bulb becoming loose due to thermal deformation of the base caused by accumulation of heat in the bulb holder, contact resistance increases in riveted portions, and a complex structure of peripheral members of the bulb holder (col. 1, lines 35-45).

In stark contrast, the Serizawa et al. reference is directed to the completely different

and unrelated problem of providing a vehicle lamp which has light-emitting elements arranged in a three-dimensional manner, and can be assembled easily and highly efficiently (col. 2, lines 7-11).

One of ordinary skill in the art who was concerned with the problems of a tendency of a bulb becoming loose due to thermal deformation of the base caused by accumulation of heat in the bulb holder, contact resistance increases in riveted portions, and a complex structure of peripheral members of the bulb holder as the Takano et al. reference is concerned with solving would not have referred to the Serizawa et al. reference, and vice-versa, because the Serizawa et al. is directed to the completely different and unrelated problem of providing a vehicle lamp which has light-emitting elements arranged in a three-dimensional manner, and can be assembled easily and highly efficiently.

Even assuming arguendo that one of ordinary skill in the art would have been motivated to combine these references, the combination would not teach or suggest each and every element of the claimed invention.

As agreed at the personal interview, none of the applied references teaches or suggests the features of the claimed invention including: two metallic radiation plates that each surround at least three outer surfaces of the holder (independent claim 1). As explained above, these features are important for radiating heat more efficiently, which permits the light emitting element to operate stably without reducing the efficiency of the light emitting element and without increasing the size of the lamp.

The Office Action alleges that the Takano et al. reference discloses two metallic radiation plates and refers to reference number 7 and Figure 1 in an attempt to support this allegation. However, reference number 7 refers to U-shaped connectors 7 that do not include

a plate that surrounds a side of an outer surface of the holder.

Rather, and in stark contrast, the Takano et al. reference discloses U-shaped connectors 7 that are “clamped within the insulating base 1 as shown in Figs. 3 through [13].” (Emphasis added, Col. 3, lines 50-53). The U-shaped connectors 7 include clamps 5 that are inserted between opposing surfaces 1a of the bulb holder 9 (col. 3, lines 55-57).

Therefore, the U-shaped connectors 7 that are disclosed by the Takano et al. reference are received inside of the bulb holder 9 and, as a result, the U-shaped connectors 7 do not surround a side of an outer surface of the holder and, thus, the connectors 7 cannot efficiently radiate heat away from the lamp.

The Takano et al. reference clearly does not teach or suggest the features of the claimed invention including two metallic radiation plates that each surround at least three outer surfaces of the holder (independent claim 1).

The Serizawa et al. reference does not remedy the deficiencies of the Takano et al. reference.

Indeed, the Serizawa et al. reference clearly does not teach or suggest a plate that surrounds any side of an outer surface of the holder.

Further, the Examiner does not allege that the Serizawa et al. reference discloses this feature.

Therefore, the Examiner is respectfully requested to withdraw the rejection of claims 1-8.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing amendments and remarks, and the agreement reached during the personal interview, Applicants respectfully submit that claims 1-9, all the claims presently pending in the Application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the Application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: _____

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